

Amendments to the Drawings:

The attached sheet of drawings includes changes to FIG. 2. This sheet, which includes FIGS. 2 and 3, replaces the original sheet including FIGS. 2 and 3. FIG. 2 has been labeled with the legend --Prior Art--.

Attachment: One replacement sheet

REMARKS/ARGUMENTS

The claims are 1-15 and 17. Claim 1 has been amended to improve its form and to incorporate subject matter previously appearing in claims 5, 8 and 9. Accordingly, claims 5, 8 and 9 have been amended in view of the amendment to claim 1. Claim 17 has also been amended to specify the wire buffer storage in a manner similar to that set forth in claim 1 as amended. In addition, claim 6 has been amended, *inter alia*, to better define the invention, and the specification has been amended to correct misspellings and incorrect reference numerals. Also FIG. 2 has been labeled with the legend --Prior Art-- as required by the Examiner. Reconsideration is expressly requested.

FIG. 2 was objected to as lacking the designation --Prior Art--. In response, Applicants have amended FIG. 2 to add the legend --Prior Art-- as requested by the Examiner.

The specification was objected to on the basis of certain informalities set forth on pages 2-3 of the Office Action. In response, Applicants have amended the specification to correct these informalities. It is respectfully submitted that these

changes to the specification overcome the formal objections to the same, and Applicants respectfully request that the objections on this basis be withdrawn.

Claims 1 and 6 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite because claim 1 used the phrase "preferably" and claim 6 used the term "further lines" which was said to be unclear. In response, Applicants have amended claims 1 and 6 to improve their form. Claim 1 has been amended, *inter alia*, to remove the word "preferably", and claim 6 has been amended to refer to lines arranged within the hose package in addition to the wire guide hose. The term "further lines" previously appearing in claim 6 refer to the situation shown in FIGS. 3 and 4 of Applicants' disclosure where the other or further lines like an electrode cable 17, cooling ducts 28 and one or several control lines 29 are arranged within the helically or spirally extending wire guide hose 38.

It is believed that the amendment to claim 6 obviates this objection and that this amendment together with the amendment to claim 1 overcomes the Examiner's rejection under 35 U.S.C. 112, second paragraph.

Claims 1, 2, 4, 15 and 17 were rejected under 35 U.S.C. 102(b) as being anticipated by *Taylor et al.* U.S. Patent No. 3,901,425. The remaining claims were rejected under 35 U.S.C. 103(a) as being unpatentable over *Taylor et al.* alone (claim 3), or further in view of *Ueyama et al.* U.S. Patent No. 4,102,483 (claims 5 and 6), *Savard et al.* U.S. Patent No. 2,964,612 (claim 14), *Bryce et al.* U.S. Patent No. 4,187,411 (claims 7 and 10), *Bryce and Parmelee et al.* U.S. Patent No. 4,731,518 (claims 8 and 9), *Strybel* U.S. Patent No. 4,458,719 (claims 11 and 12), or *Strybel and Huismann et al.* U.S. Patent No. 7,165,702 (claim 13).

Essentially, the Examiner's position was that *Taylor et al.* discloses the buffer device recited in the claims except for features which were said to be within the skill of the art or taught by the secondary references to *Ueyama et al.*, *Savard et al.*, *Bryce et al.*, *Parmelee et al.*, *Strybel* or *Huismann et al.*

This rejection is respectfully traversed.

As set forth in claim 1 as amended, Applicants' invention provides a buffer device for a welding wire wherein a wire buffer storage is arranged between a wire feeder provided on the welding

apparatus, or an external wire feeding means, and a further wire feeder arranged in the region of a welding torch, or within the welding torch, and the welding wire is conducted between the two wire feeders within a wire core.

The wire buffer storage is designed in a manner that the wire core is fastened or fixed on one end with its other end being freely movable. The wire core together with the welding wire at least over a partial region is arranged to be freely movable within a wire guide hose extending in a helix-shaped or spiral-shaped manner and having a substantially larger cross section or inner diameter than the cross section or outer diameter of the wire core. The storage volume of the wire buffer storage is defined by the cross section and length of the substantially larger wire guide hose.

In this way, Applicants' invention provides a buffer device in which the wire guide hose serves as a wire buffer storage because the wire core is able to move freely, that is to say evade, within the substantially larger wire guide hose and, hence, take up the surplus welding wire, for instance at a backward conveyance. It is, thus, no longer required to push the

welding wire back over the entire wire core. Rather, the welding wire and the wire core are freely movable in the wire guide hose so as to enable surplus welding wire to be taken up for compensation. It is thereby ensured that no displacement of the welding wire through the wire core in the wire buffer storage need be effected by the wire feeder in the region of the welding torch at a backward movement of the welding wire. The wire core is deformed directly in the wire guide hose and surplus wire will, hence, be taken up by such deformation.

The primary reference to *Taylor et al.* discloses a wire moving apparatus for moving a welding wire through a hollow, flexible cable to a nozzle of a welding torch, being connected with the flexible cable. *Taylor et al.* fails to disclose or suggest a welding wire buffer as recited in Applicants' claim 1 as amended, which enables the storage of small amounts of welding wire, for instance, during reversal of the direction of conveyance of the welding wire. To enable a movement of the welding wire against the normal conveyance direction it is necessary to reverse the direction of rotation of both feeding mechanisms in the wire feed assembly 14 as well as in the gun assembly 18. According to *Taylor et al.* it is not possible to

maintain the direction of rotation of the wire feeder in the gun assembly and to store a small amount of welding wire 12 within the cable assembly 16.

The defects and deficiencies of the primary reference to *Taylor et al.* are nowhere remedied by the secondary reference to *Ueyama et al.*, which discloses a method for feeding a welding wire from a wire reel to a welding torch 18, via a conduit cable 14. The conduit cable has a wire guide 4 with an elongated cross section to enable the storage of a small amount of welding wire by deforming the straight welding wire in the elongated cross section of the wire guide bore of the conduit cable in the form of a sine curve.

According to Applicants' buffer device as recited in claim 1 as amended, the wire buffer storage is designed in a manner that the wire core 30 is fastened or fixed on one end with its other end being freely moveable. The wire core 30 together with the welding wire 13 at least over a partial region is arranged to be freely moveable within a wire guide hose 38 extending in a helix-shaped or spiral-shaped manner and having a substantially larger cross section 39 or inner diameter than the cross section or

outer diameter 33 of the wire core 30. The storage volume of the wire buffer storage 35 is defined by the cross section 39 and length of the substantially larger wire guide hose 38.

As stated above, it is thereby achieved that the wire guide hose serves as a wire buffer storage because the wire core is able to move freely, that is to say evade, within the substantially larger wire guide hose and, hence, take up the surplus welding wire, for instance at a backward conveyance. It is thus, no longer required to push the welding wire back over the entire wire core. Rather, the welding wire and the wire core are freely movable in the wire guide hose so as to enable surplus welding wire to be taken up for compensation.

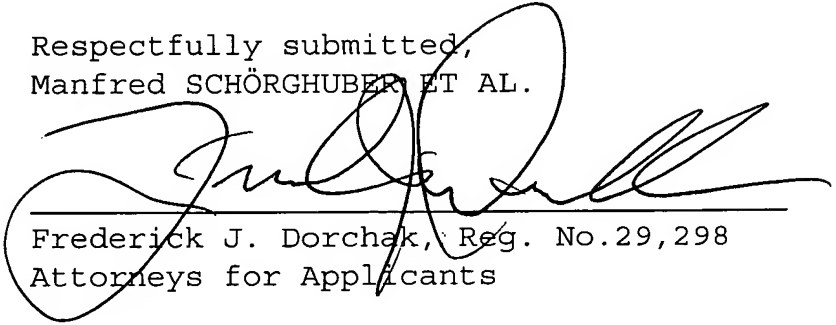
It is respectfully submitted that neither *Taylor et al.* nor *Ueyama et al.* nor any of the other documents cited by the Examiner *Savard et al.*, *Bryce et al.*, *Parmalee et al.*, *Strybel* or *Huismann et al.* show a buffer device with the construction that is recited in claim 1 as amended, or renders such construction obvious.

Claim 15, as amended, is directed to a welding plant including, *inter alia*, a device designed as a wire buffer storage and arranged between two wire feeders, wherein the wire buffer storage is designed in a manner that the wire core is fastened or fixed on one end, with its other end being freely movable, wherein the wire core together with the welding wire, at least over a partial region, is arranged to be freely movable within a wire guide hose extending in a helix-shaped or spiral-shaped manner and having a substantially larger cross section or inner diameter than the cross section or outer diameter of the wire core, and wherein the storage volume of the wire buffer storage is defined by the cross section and length of the substantially larger wire guide hose. Therefore, it is respectfully submitted that claim 15, as amended, is patentable over the cited references as well.

In summary, claims 1, 5, 6, 8, 9, and 15 have been amended, along with the specification and FIG. 2. In view of the foregoing, it is respectfully requested that the claims be allowed and that this case be passed to issue.



Respectfully submitted,
Manfred SCHÖRGHUBER ET AL.

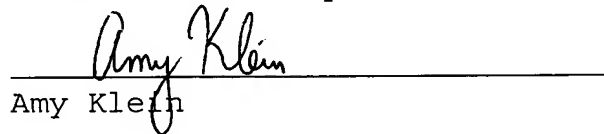


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Enclosures: Appendix - One (1) replacement sheet of drawings

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: MAIL STOP AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 10, 2009.


Amy Klein

APPENDIX